

Resilience

Worldwatch Institute Symposium - April 2013 Is Sustainability Still Possible?

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On Tuesday, April 16, the Worldwatch Institute held its seventeenth annual State of the World Symposium to launch its latest book, *State of the World 2013: Is Sustainability Still Possible?* As contributors to the book, Pat Murphy and Faith Morgan were invited to attend the event, where Pat spoke on one of several panels. The complex topic of sustainability was addressed along with

the need to measure it in order to prepare for the currently unsustainable future toward which we are making quick strides. The symposium was held in Washington, but an online live stream of the panels was offered for those of us who could not make it to D.C.

It began with an introductory video sprinkled with pop culture references that gave an appropriately thorough summary of the state of the world to the whimsical background music of a Ludwig van Beethoven symphony. Quickly, however, the initially light-hearted tone of the video gave way to powerful images of urban graveyards, burning forests, and collapsed ecosystems, showing the effects of the consumptive lifestyle we as a species have fallen into. The music faded away, leaving only a steady, heavy ticking that alerted the audience to the fact that we are on a schedule, and our time is running out. As the video ended, Tom Prugh, co-director of *State of the World 2013*, stepped to the front of the stage to deliver his opening remarks. As he surveyed the audience, he spread his arms and pronounced, “Welcome to our world.”

Despite the somber atmosphere established early on, the symposium was not depressing by any means. Rather, it was realistic about our situation, an admirable feat when one considers the nonchalant attitude that the majority of the world takes when it comes to the problems we are facing today. Robert Engelman, President of Worldwatch Institute, called attention to one inconsistency that contributes to the issue. According to Engelman, an unambiguous definition for sustainability is necessary to avoid incomprehensible “sustainababble” and the tendency that has arisen to use

sustainability as a marketing tool, effectively ridding the word of all impact. Until we have such a definition, it is nearly impossible to determine what sustainability is, how we can achieve it, and how far away from it we are. Engelman defined it as “living decently in the present without undermining the capacity of future generations to live just as decently as we are doing,” or, to put it more succinctly, “that which can endure and takes the future into account.” In terms of that definition, he does not think we are on the right track. In fact, he claimed, “Today, we are probably further away from sustainability than we were twenty-one years ago.”

When it comes to the question that *State of the World 2013* asks—*Is sustainability still possible?*—Engelman said he doesn’t consider the question necessary. He went on to say that nature is in the early stages of unraveling and will find a sustainable level eventually, noting that with climate change comes an increasing need to keep fossil fuels in the ground. Rather than laboring over whether or not sustainability is possible, Engelman supposes we should prepare for a world that has nearly exhausted its resources and a future that will bring hardships unlike any humanity has previously experienced.

The first panel, *Getting to True Sustainability*, endeavored to address possible solutions for repairing our world. The panelists were Shakuntala Makhijani, research associate for Worldwatch Institute’s Climate and Energy Program; Jennie Moore, director of sustainable development and environmental stewardship in the School of Construction and the Environment at British Columbia Institute of Technology; Eric Zencey, fellow of the Gund Institute for Ecological Economics at the University of Vermont; and Sandra Postel, director and founder of the Global Water Policy Project.

Each speaker discussed the overwhelming addiction to consumption that humans have displayed for decades. Moore advocated for reducing our intake of red meat, transitioning into an economy that shares resources, and stopping reliance on the automobile. Following this line of curtailment, Makhijani said that, although we have the land for renewable energy to fill our needs, widespread use of land could have devastating impacts on many ecosystems. She said that renewable energy programs must be integrated to respect local land agreements and limitations, and would need to be implemented globally.

Postel agreed with the need to reduce red-meat consumption, and also spoke about the problem of a growing consumer population in regards to our fresh water. She explained that 10% of today’s food supply depends on the currently unsustainable use of rapidly diminishing groundwater.

“Sustainability means,” she stressed, “providing enough water, at sufficient quality, at the right time, to sustain both people and ecosystems—and where we tap ground water, making sure we don’t deplete the supply. We’re literally taking tomorrow’s water to meet today’s food demands. It’s unsustainable at every level.” As our population continues to grow, the amount of water remains at a stagnant level. Having balances to control our use of water can apply across the board to all rapidly depleting resources. According to Postel, there is also an overwhelming need for us to create “space” for people living in poor conditions to have an improved quality of life, and this cannot happen without caps on our consumption. She suggested reducing the amount of water we “eat” through processed foods, buying less clothing each year, and carpooling to save both water and energy. With an economist’s point-of-view, Zencey interjected, “The point of the economy isn’t to cycle resources through as fast as possible . . . the point of the economy should be deliberate, sustainable

well-being." He cautioned, however, that we can't reach this target without learning to measure the costs compared to the gains of our productivity methods. He noted that there are consequences of using land and water for renewable energy. The Earth may reach sustainability, but how much will we suffer on the journey? There is a need, Zencey said, to get the press to report these and other ecological truths rather than what they imagine the people want to hear. Civil society should be the drivers of the change, rather than merely be consumers.

The second panel, *Preparing for the Long Emergency*, examined our future on this planet. The panelists were Erik Assadourian, senior fellow at Worldwatch Institute; Michael Maniates, professor of environmental science and political science at Allegheny College and an Oberlin College visiting professor of environmental studies; author Laurie Mazur; and our own Research Director, Pat Murphy. They emphasized that we do not have to resign ourselves to a completely bleak future. As Mazur said, "The good news is that humans are nothing if not resilient. . . . but the bad news is that the societies that we are living in are undermining both natural and human resilience at every turn. I think the challenge surrounding us is to build societies that re-enforce rather than undermine our innate resilience." As she explained in her chapter "Cultivating Resilience in a Dangerous World," a system for a successful, resilient society must have diverse components, several ways to perform basic functions, modularity and self-sufficiency, reserves, social capital, agency, inclusiveness, and tight feedback. While the overpopulation of the rich makes population control a difficult topic to discuss, Mazur maintained that the reparation of our world will require "inclusive economic shrinkage" and exercising our human capacity for innovation and compassion for one another as well as the world.

Maniates approached the topic of sustainability from an educator's perspective. He affirmed that the good news is there are more students in environmental science programs today than ever before. According to Maniates's chapter, "Teaching for Turbulence," the United States has the largest concentration of environmental studies and science (ESS) programs in the world. In the past 23 years the number has nearly doubled from 500 programs to 1,200, making ESS one of the fastest-growing fields of undergraduate study in the country. The bad news, however, is that the training the students are receiving is inefficient and incoherent, leaving graduates ill-prepared to traverse a turbulent future. ESS programs became the go-to for students who could not succeed in biology, chemistry, or geology. "On more than a few campuses," Maniates wrote, "'ES' came to stand for 'easy science.'" One problem is that current programs are too small-scale. In addition, he explained three common patterns of teaching that are apparent in today's programs. The first tends toward giving students a sense of urgency for the coming crisis. They realize that the institutions they would normally look to for solutions—the market, the government, and education—are unable to address current environmental issues, and they begin to assume that crises are the only way to prompt the system into change. The second teaching design focuses on assessing environmental dangers and evaluating differing solutions. The third type of course encourages local or campus-wide community projects such as recycling initiatives with the hope that the knowledge gleaned can be applied on a larger scale. Although these approaches are admirable, Maniates believes that it is necessary to have an emphasis on political power and cultural transformation in order to implement any lasting change. After a survey conducted by Sam Rigotti, an environmental studies student at Allegheny College, it

became clear that around 75% of students surveyed thought that buying more vegetables, applying a few “green” lifestyle changes, and simply spreading the word would be more likely to change the world than any political engagement. Maniates finds this way of thinking to be “attractive, plausible, and dead wrong.” He notes that most Americans resist changing their behavior in any consistent manner. But even if they were to drastically change their lifestyles, Maniates maintained that problems largely unrelated to personal consumption would still cause our ecosystem to collapse, “albeit just a bit more slowly.” Thus the need for political engagement.

Clearly, crises are coming. However, Maniates believes they will not be the “system-jarring” crises that people expect. Instead, he said, “the disasters that ESS graduates will confront are likely to be slow-motion affairs. . . . Water will grow scarcer, food prices will rise, coastal cities will periodically flood as increasingly intense storms lash their shores, droughts will become more commonplace, livelihoods will be disrupted, economies may falter, and inequality will deepen.” These smaller, gradual disasters will cause what environmental analysts refer to as “‘insecure affluence’: the growing sense among a large slice of Americans that their economic position in life is unstable at best and more likely at imminent risk.” They will not want to sacrifice, especially not when asked to by “elitist” environmentalists...

Despite this bleak outlook, he insisted that it “doesn’t have to be this way.” He advocated a reworking of current ESS programs, and in “Teaching for Turbulence,” he outlined a successful program as one which gave students the “theoretical background and classroom practice to explore how they can best pursue their passions in rough water.” The program would ask students to think critically and imaginatively about human nature and the nature of crisis, interrogate competing theories of political and cultural change, and foster strategic thinking about a politics of anger or the anxiety that comes with insecure affluence. He also encourages programs to “explore the changing role of science and scientists in the struggle for sustainability.” Maniates believes that if these programs are made to be coherent and if students are re-engaged with problems that really matter along with a focus on social transformation, a successful environmental revolution can be effected. *Pat used Cuba as an example of such a revolution.* In their chapter “Cuba: Lessons from a Forced Decline,” Pat noted that “Cuba has become an important example, since in the past two decades it has reduced its carbon dioxide (CO₂) emissions by 25 percent, from 3.2 tons per person in 1990 to 2.4 tons in 2009. Cuba’s focus on meeting basic human needs instead of on economic growth and consumption offers an important example to the rest of the world.” With the collapse of the USSR in 1990, Cuba was cut off from 80% of their food supply and half their oil. Without fuel, car use declined and the public transportation system was revitalized. Without food imports, they were forced to change their diet and begin organic gardening with oxen. The United States cut off trade access to Cuba, and without a market for its goods, exports dropped 75 percent, resulting in critical food shortages. “In response to the crisis,” Pat noted, “Cuba announced the implementation of the Periodo Especial (Special Period) in August 1990,” a series of contingency plans developed for wartime. They rationed their food, began reforestation projects for bio fuels, cleaned up rivers, and implemented solar, wind, and mini-hydropower for additional electricity. Urban farming has become a large contributor of domestic fruits and vegetables.

According to Pat, “Urban farms produce 1.5 million tons of vegetables a year without using synthetic chemicals and supply 70 percent or more of the fresh vegetables consumed in Havana and other cities. Pat believes that the reason Cuba has survived and thrived despite the crushing blow to their economy is because “they operate on a system of cooperation rather than competition.” Clearly, their forced decline resulted in a system that has improved their way of living in many ways—Cuba holds equal or better figures with the United States on many terms. According to Pat, “Cubans use 85 percent less energy on average and account for 86 percent less CO₂” than Americans. Cuba boasts 6.4 physicians per 1,000 people, more than double the 2.67 physicians per 1,000 people that the United States has. Cubans are just below the United States life expectancy of 78.4 years with an expectancy of 77.7 years, and their birth rate of 4.8 deaths per 1,000 births is much lower than the United States mortality rate of 6.06 deaths. Pat pointed out, “Cuba represents an alternative where material success as measured by energy consumption is secondary while other quality-of-life issues are given priority. The message is clear: humanity will survive and can even thrive in a resource-constrained world if it learns from the Cuban example.”

People were intrigued by Cuba’s success, and Pat was asked several questions about the Cubans and their lifestyle. David Orr of Oberlin College said that an American audience would complain, ‘Oh my god, you’re asking us to sacrifice!’ if asked to change their way of living as drastically as the Cubans did. He challenged Pat to morph the message into a more positive one in order to appeal to a wider audience, and Pat’s frank response was to relate Cuba’s situation to what he learned from his heart attack years before. “If you want to survive,” he said, “you’re going to have to make some changes.”

Assadourian agreed, saying that this is about saving the planet as well as ourselves. In his chapter “Building an Enduring Environmental Movement,” he stressed the need for a shift to a sustainable, independent, and resilient society. He wrote, “Humanity needs... a sense of intergenerational responsibility.... To spread these, the movement will need to redevelop its grassroots potential, diversify its sources of funding, and use a variety of innovative strategies like embedding environmental education into schools’ core curricula.” It is his belief that, rather than struggling to reduce overall toxicity levels, environmentalism should aim to “transform the dominant growth-centric economic and cultural paradigm into an eco-centric one that respects planetary boundaries.” How is such a feat accomplished? One way, Assadourian suggested, is to create an ecological philosophy able to guide individuals’ behavior and recommit a large community of people to helping the planet flourish. He wrote, “The ethics of an effective eco-philosophy must be grounded ... in Earth’s ecological realities and should facilitate humanity’s Earth-nurturing purpose.” He compared such a philosophy to religions of the past in that it cannot be successful without the ability to spread its message and cultivate a community. He suggested providing social programs, schools that promote an environmentalist philosophy, and eco-clinics that spread prevention methods as well as supplying medicine. To receive money for such services will require a tight-knit community, and Assadourian believes that people are more likely to give to their own communities than to indifferent door-to-door solicitors. Whether or not an environmentalist philosophy takes off, he hopes we can avoid a total collapse. “The second hope is that, failing this,” he wrote, “we preserve enough

knowledge and wisdom so that... our great-great-great-great-great grandchildren do not reinvent our mistakes.”

Science fiction novelist and keynote speaker Kim Stanley Robinson presented a similar message. According to Robinson, when we ask whether it is too late to become sustainable, the question we are truly asking is, “Have we wrecked the capacity of our earth to sustain our weight and needs?” He predicted that with our current lifestyle, it is inevitable that we will pass the planet’s carrying capacity. As a result, the planet will have to find some equilibrium. “At some point,” he said, “sustainability comes about because the opposite is a crash.” But what will the consequences be? We want to believe in a silver bullet, a fix-all to this problem, but what we need is a new society that *measures and uses science to take action*. His perspective as a writer of science fiction was interesting—truly, the dystopian futures that are so prevalent in such novels have become our present and our immediate future if we do not change our ways. Still, although prospects seem grim, there is also hope. As Robinson said, “I think we can do this, because I think it is the only thing— to adapt to dangerous situations.”

Sustainability is not just a word but, as Erik Assadourian pointed out, a philosophy. The fact that books such as this are written, that we hold symposiums with people who believe so strongly in the need for change, the fact that we are able to have intelligent discourse on the merits and problems of the subject... that, I think, is one of the greatest tools we have. We may not be a majority, but to quote Samuel Adams, “It does not require a majority to prevail, but rather an irate, tireless minority keen to set brush fires in people’s minds.

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